

Mathematics 9 Semester 1 2012 -LHHS
Review for Common Assessment

Name: Solutions

1. $24 + 6 \times 2$

$24 + 12$ 36

2. $(18 \div 2 - 1 \times 7) + 6$

$(9 - 7) + 6$ $2 + 6$ 8

3. $(12 - 2 \times 3) \div 2$

$(12 - 6) \div 2$ $6 \div 2$ 3
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4. $(1 + 3^2) \times 2$

$(1 + 9) \times 2$ 10×2 20

5. $(8 + 5 \times 4)^2 \div 2$

9. Write the equivalent fraction.

a) $\frac{3}{8} = \frac{9}{?}$

b) $\frac{2}{3} = \frac{?}{21}$

24	14
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10. Which is greater?

a) $\frac{5}{8}$ or $\frac{6}{7}$

b) $\frac{2}{3}$ or $\frac{2}{7}$

Cross product $35 < 48$ $\frac{5}{8} < \frac{6}{7}$	Cross product $14 > 6$ $\frac{2}{3} > \frac{2}{7}$
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11. Express as an improper fraction.

a) $-7\frac{1}{9}$

b) $5\frac{4}{7}$

$-\frac{64}{9}$	$\frac{39}{7}$
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12. Express as a mixed number.

a) $-\frac{12}{5}$

b) $\frac{23}{4}$

$-2\frac{2}{5}$	$5\frac{3}{4}$
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13. Find the sum or difference. (**SUM** means to add, **DIFFERENCE** means to subtract)

a) $\frac{2}{3} + \frac{7}{15}$

b) $4 - 2\frac{5}{8}$

$\frac{10}{15} + \frac{7}{15} = \frac{17}{15} = 1\frac{2}{15}$	$\frac{32}{8} - \frac{21}{8} = \frac{11}{8} = 1\frac{3}{8}$
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c) $3\frac{1}{2} + 5\frac{5}{8}$

d) $5\frac{1}{4} - 1\frac{2}{3}$

$\frac{7}{2} + \frac{45}{8} = \frac{28}{8} + \frac{45}{8} = \frac{73}{8} = 9\frac{1}{8}$	$\frac{21}{4} - \frac{5}{3} = \frac{63}{12} - \frac{20}{12} = \frac{43}{12} = 3\frac{7}{12}$
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17. Multiply or divide.

a) $\frac{4}{5} \times 15$

b) $\frac{3}{7} \div \frac{15}{7}$

c) $\frac{2}{3} \div \frac{7}{9}$

$\frac{4}{5} \times \frac{15}{1} = \frac{60}{5} = 12$	$\frac{3}{7} \times \frac{7}{15} = \frac{3}{15} = \frac{1}{5}$	$\frac{2}{3} \times \frac{9}{7} = \frac{18}{21} = \frac{6}{7}$
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18. Find the result.

a) $\frac{7}{8} \times \frac{1}{4} \div \frac{4}{8}$

b) $\frac{2}{3} \times \frac{1}{3} \div \frac{8}{9}$

c) $5\frac{1}{3} \div \frac{8}{3} \div 4\frac{1}{2}$

$\frac{7}{8} \times \frac{1}{4} \times \frac{8}{4} = \frac{7}{16}$	$\frac{2}{3} \times \frac{1}{3} \times \frac{9}{8} = \frac{1}{4}$	$\frac{16}{3} \times \frac{3}{8} \times \frac{2}{9} = \frac{4}{9}$
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d) $(-24) + (-8) - (+11) - (-15) + (+9)$ e) $(30) - (29) - (-17) + (-22) - (-13)$

$-24 - 8 - 11 + 15 + 9$ $-43 + 24$ -19	$30 - 29 + 17 - 22 + 13$ $30 + 17 + 13 - 29 - 22$ $60 - 51$ 9
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19. a) If Sarah ate $\frac{2}{3}$ of the cookies and Shannon ate $\frac{1}{5}$ of them, what fraction of the cookies did they eat in total? What fraction of the cookies are left?
- b) In a class of 35 students, $\frac{2}{7}$ of them were absent one day. How many students were absent? How many students were in class?

a) $\frac{2}{3} + \frac{1}{5} = \frac{10}{15} + \frac{3}{15} = \frac{13}{15}$ was eaten. $\frac{2}{15}$ is left over
b) $\frac{35}{1} \times \frac{2}{7} = \frac{70}{7} = 10$ students were absent. 35 students in the class

20. Place $<$, $>$, $=$ to make the statement true.

a) $\frac{15}{-12}$, $\frac{-12}{15}$ b) $-\frac{4}{10}$, $\frac{2}{-5}$ c) -1.3 , $-\frac{5}{2}$

$<$	$=$	$>$
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21. Multiply or divide

a) $\frac{-2}{3} \times 24$ b) $\frac{-3}{7} \div (\frac{-18}{7})$ c) $\frac{7}{36} \div (-\frac{7}{9})$

$\frac{-2}{3} \times \frac{24}{1} = -16$	$\frac{-3}{7} \times \frac{-7}{18} = \frac{3}{18} = \frac{1}{6}$	$\frac{7}{36} \times \frac{-9}{7} = \frac{-9}{36} = \frac{-1}{4}$
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d) $\frac{-3}{-4} \div (\frac{5}{-16})$ e) $1\frac{1}{4} \div 2$ f) $5\frac{2}{3} \div -3\frac{1}{2}$

$\frac{3}{4} \times \frac{16}{5} = \frac{12}{5} = 2\frac{2}{5}$	$\frac{5}{4} \times \frac{1}{2} = \frac{5}{8}$	$\frac{17}{3} \times (\frac{-2}{7}) = \frac{-34}{21} = -1\frac{13}{21}$
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22. Find the result.

a) $-\frac{4}{3} \times (\frac{2}{-3}) \div (\frac{-8}{18})$ b) $-9\frac{1}{3} \div \frac{10}{3} \div (-4\frac{1}{2})$

$-\frac{4}{3} \left(\frac{-2}{3} \right) \left(\frac{-18}{8} \right) = 2$	$-\frac{28}{3} \left(\frac{3}{10} \right) \left(\frac{-2}{9} \right) = \frac{28}{45}$
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23. Add and Subtract.

a) $-\frac{1}{5} - (\frac{2}{-3})$ b) $-3\frac{2}{3} + (-1\frac{1}{6})$ c) $\frac{-3}{-10} - \frac{2}{5}$

$-\frac{1}{5} + \frac{2}{3} = \frac{-3}{15} + \frac{10}{15} = \frac{7}{15}$	$-\frac{11}{3} - \frac{7}{6} = \frac{-22}{6} - \frac{7}{6} = \frac{-29}{6} = -4\frac{5}{6}$	$\frac{3}{10} - \frac{4}{10} = \frac{-1}{10}$
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$\frac{-35}{6} - \frac{41}{12} = \frac{-70}{12} - \frac{41}{12} = \frac{-111}{12} = -9\frac{1}{4}$	$\frac{5}{2} - \frac{7}{10} - \frac{3}{5} = \frac{25}{10} - \frac{7}{10} - \frac{6}{10} = \frac{12}{10} = 1\frac{1}{5}$
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24. Evaluate.

a) $\sqrt{64} + \sqrt{100}$

b) $\sqrt{\frac{36}{81}}$

c) $\sqrt{36} \times \sqrt{49}$

$8 + 10 = 18$	$\frac{6}{9}$	$6 \times 7 = 42$
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d) $\sqrt{36 + 64}$

e) $\sqrt{16 \times 64}$

f) $\sqrt{25 + \sqrt{121}}$

$\sqrt{100} = 10$	$\sqrt{1024} = 32$	$\sqrt{25 + 11} = \sqrt{36} = 6$
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25. Evaluate.

a) 5^3

b) -5^3

c) 8^3

125	-125	512
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d) $\frac{3^2}{4^2}$

e) $(-8.2)^0$

f) $\frac{6^2}{5^0}$

$\frac{9}{16}$	1	$\frac{36}{1} = 36$
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